In a state of low hepc levels, intestinal iron absorption can be well preserved. We examined whether smaller or normal MCV affects the therapeutic effect of OIA in HD patients with low hepc levels. Serum hepc were measured in 66 patients on HD. Of these, oral iron was immediately administered in 14 cases who had low serum hepc levels ($<$ 14ng/ml). Hb was measured before and 8 weeks after OIA. Serum levels of ferr, hepc, MCV and Hb were measured before starting HD. A correlation between the based MCV and improvement of Hb was analyzed. Mean hepc levels were 14.0 $\pm$ 22.6 ng/mL in 66 cases. Serum levels of hepc correlated with ferr ($r=0.46$, $p<0.01$). The values for MCV were less than 88fL in 6 cases (LMCV group, HD duration, 8.7 $\pm$ 4.4 years, and the OIA dose, 50 mg/day). The remaining 8 cases showed normal MCV (96.6 $\pm$ 5.7fL) (NMCV group, 7.3 $\pm$ 4.6 years, 62.5mg/day). In LMCV group, Hb increased from 9.4 $\pm$ 0.4g/dL to 11.2 $\pm$ 3.5g/dL. In NMCV group, they increased from 10.3 $\pm$ 2.1g/dL to 11.1 $\pm$ 2.2g/dL. An increment in Hb was significantly greater in LMCV group (3.1 $\pm$ 1.2g/dL, $p<0.05$) than that in NMCV group (0.8 $\pm$ 2.2g/dL). There was no difference between L and N MCV groups in Hb (9.4 $\pm$ 0.4, vs. 10.3 $\pm$ 2.1 g/dL), and serum levels of ferr (7.8 $\pm$ 4.3, vs. 13.9 $\pm$ 10.0ng/mL) and hepc (4.6 $\pm$ 6.6, vs. 3.7 $\pm$ 4.0 ng/ mL). In conclusions, in a state of low hepcidin, OIA is more beneficial for anemia in HD patients with low MCV than in those with normal MCV.

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INTERACTION BETWEEN DIETARY PHOSPHATE AND CARBOHYDRATE ON GLUCOSE AND PHOSPHATE METABOLISMS IN HEALTHY YOUNG MEN.

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Interaction between the nutrients should be considered to understand the relationship between nutrient intake and disease. Here, we investigated the effects of combination of dietary phosphate and carbohydrate (glycemic index; GI) on urinary phosphate excretion, serum glucose, insulin, phosphate, PTH levels after the digestion of experimental meal in 11 young healthy men. We employed 4 different meals; high GI and high phosphate (HGHP), high GI and low phosphate (HGLP), low GI and high phosphate (LGHP), and low GI and low phosphate (LGLP). Barley was used for staple food in low GI meals, inversely white rice in high GI meals. Low phosphate meals contained 400 mg of phosphate, high phosphate meals contained 1200 mg of phosphate added as sodium phosphate. This study was performed as a crossover study, and approved by the ethical committee of the University of Tokushima. Ingestion of HGHP meal revealed higher postprandial phosphate excretion than LGHP meal. This difference was not observed between HGLP and LGLP meals. HGHP meals was also involved in higher postprandial increases in blood glucose and insulin than HGLP. Meanwhile intact PTH level in the ingestion of LGHP meals was significantly higher than that in HGHP. No significant difference in serum phosphate level between HGHP and LGHP groups. These data indicate that interaction between dietary phosphate and carbohydrate affected postprandial changes in serum glucose and phosphate handling in healthy young men.

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RELATIONSHIP BETWEEN TOTAL GHRELIN AND NUTRITIONAL PARAMETERS IN MAINTENANCE HEMODIALYSIS PATIENTS

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Ghrelin is regarded to be correlated to nutrition status. To verify this relationship, 30 patients on hemodialysis(HD), 18 patients with chronic kidney disease(CKD) and 18 healthy volunteers(Control) were involved in this observational study. Total plasma ghrelin(ELISA) and nutritional parameters (including biochemical index, body composition, and nutrition risk screening score 2002, NRS2002) were measured. Data were showed by Mean $\pm$ SD, probability values <0.05 were considered significant. Statistical analysis was determined using SPSS 15.0. Ghrelin levels was significantly increased in HD patients (4.55 $\pm$ 2.34ng/ml (pre-HD), $p<0.0001$) than in CKD(2.32 $\pm$ 1.32ng/ml) and Control (1.99 $\pm$ 0.83ng/ml),and declined after HD(2.27 $\pm$ 1.12ng/ml, $p<0.0001$). In HD group, plasma ghrelin levels were negatively correlated with pre-albumin(PA, r=-0.461,P=0.010). When all participants combined together, the plasma ghrelin levels was positively correlated with serum creatinine(r=0.426,P=0.0001) and urea nitrogen(r=0.366,P=0.003),but negatively correlated with e-GFR(r=-0.411,P=0.001), PA(r=-0.321s,P=0.009) and lymphocyte(r=-0.417,P=0.0001). No relationship was showed between ghrelin and BMI, NRS2002 in HD group. In conclusion, total ghrelin levels was elevated in HD patients, and negatively correlated with pre-albumin, and negatively correlate with PA,lymphocyte in all participants. A future study with the stratification of HD patients according to their appetite and body composition may help to further evaluation.

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INFLUENCE OF DIFFERENT INTAKE OF SOY PROTEIN ON SERUM URIC ACID AND RENAL FUNCTION IN HYPERURICEMIC RATS

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To investigate the influence of different intake of soybean-based protein on sesrum uric acid and renal function in hyperuricemic rats. The hyperuricemic rat induced by 5% potassium oxonate were divided into three groups randomly and fed with low (11%), normal (22%) , high (45%) soy protein diet respectively. The rats were followed for six weeks. Serum and urine biochemical parameters including uric acid, creatinine were measured every week. Compared with 22% soy protein group, serum levels of uric acid in 11% soy protein group were significantly lower in the fourth, fifth and sixth week($P<0.05$) whereas serum uric acid levels in 45% soy protein group were significantly higher from the second week to the fifth week($P<0.05$). Serum creatinine in 11% soy protein group decreased significantly in the sixth week. Increases of serum creatinine in 45% soy protein group were detected in the second and third week. There were no differences in body weight among the three groups at the end of the study. We have not found any differences in the serum lipid and albumin level, or the amount of urinary excretion of uric acid, creatinine and protein among three groups. In conclusion,high soy-based protein food increased the serum uric acid level and damaged the kidney function in SD rat. However, low soy protein food can maintain the nutritious status in the experienced rats. It also can decrease the serum uric acid level and protect renal function in hyperuricemic rats.

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EVALUATION OF NUTRITIONAL ASSESSMENT IN ELDER PATIENTS WITH CONTINUOUS AMBULATORY PERITONEAL DIALYSIS: COMPARING THE MINI NUTRITIONAL ASSESSMENT (MNA) WITH THE SUBJECT GLOBAL ASSESSMENT (SGA)

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The DOQI 2000 recommends the subjective global assessment(SGA)for the nutritional evaluation in patient with continuous ambulatory peritoneal dialysis(CAPD). In 1990s, the mini nutritional assessment (MNA)has been used successfully in the evaluation of the nutrition status in the flail elder person. Is it more suitable for MNA than SGA in assessment the nutrition of elder CAPD patient? In this study, we compared the MNA method with the traditional SGA in the evaluating the nutritional status in elder CAPD patients. We used the cross-sectional study with selection of the patient. Forty-five elder CAPD patients 21 male and 24 female with more than 60 years old, were enrolled in this study. SGA and MN questionnaire, anthropometric parameters and laboratory test were investigated in those patients. The normalized protein equivalent of total nitrogen appearance (nPNA) was calculated. The result were: 1)These patients were classified into three nutritional classes according to the SGA (i.e. normal nutrition SGA considered as A, mild to moderate malnutrition SGA as B, and severe malnutrition SGA as C). The corresponding, classification according to the MNA was normal nutrition(MNAl), at risk of malnutrition(MNA2), and severe malnutrition(MNA 3). In the SGA classification, 49% were assessed as A, 31% in B and 20% in C, while the corresponding figures in MNA Was 40% in MNA 1, 38% in MNA 2 and 22% in MNA 3. Either in SGA or in MNA assessment . the dietary protein intake (DPI), dietary energy intake (DEI), serum albumin(Alb), nPNA, months On